DOCUMENT RESUME

ED 472 326 PS 030 707

AUTHOR Casady, Angela; Luster, Tom; Bates, Laura; Vandenbelt, Marcia

TITLE The Early Academic Success of Children Born to Low-Income Teenage Mothers.

PUB DATE 2002-06-00

NOTE 19p.; Paper presented at the National Head Start Research Conference (6th, Washington, DC, June 26-29, 2002). Appendix A is not available from ERIC.

PUB TYPE Reports - Research (143) -- Speeches/Meeting Papers (150)

EDRS PRICE EDRS Price MF01/PC01 Plus Postage.

DESCRIPTORS *Academic Achievement; Child Rearing; *Early Parenthood; *Family Environment; Grade 1; *High Risk Students; *Low Income Groups; Mothers; Parent Child Relationship; Parenting Styles; Young Children

IDENTIFIERS Protective Factors

ABSTRACT

This study focused on family influences on the academic success of first-grade children born to low-income, adolescent mothers. The families in this study were participants in a family support program for teen mothers called Family TIES (Trust, Information, Encouragement, and Support). Families were eligible for services provided by paraprofessional family advocates from the prenatal period until children reached the age of 5 years. Achievement test scores and teacher ratings were used to identify the most successful (highest 25 percent) and least successful (lowest 25 percent) students in first grade. Researchers conducted interviews with the family advocates about the life histories of children in each of these groups. A qualitative analysis of the interview data revealed differences between the two groups in the areas of caregiving practices, maternal characteristics, child characteristics, and contextual sources of stress and support (Luster, Bates, Vendenbelt, and Casady, 2001). Recurrent themes, including maternal intelligence, maternal determination, lack of abuse in the home, academic stimulation, and the presence of a caring adult, acted as protective factors leading to academic achievement. Odds ratios indicated a significant relationship between these factors and academic success. In addition, odds ratios indicated that the negative relationship between harsh parenting and academic success did not differ for African-American children. These data provide information about early school success among children considered to be "at risk" for school failure. (Contains 43 references.) (Author/EV)

Reproductions supplied by EDRS are the best that can be made
from the original document.

The Early Academic Success of Children Born to Low-Income Teenage Mothers

by Angela Casady, Tom Luster, Laura Bates, and Marcia Vandenbelt

presented at the Head Start Conference, June 2002

ED 472 326

Abstract:

A quantitative analysis of qualitative data indicated that environmental differences relate to early school success of children born to low-income adolescent mothers. The families in this study were participants in a family support program for teen mothers called Family TIES (Trust, Information, Encouragement, and Support). Families were eligible for services provided by paraprofessional family advocates from the prenatal period until the children reached the age of 5 years. Achievement test scores and teacher ratings were used to identify the most successful (highest 25%) and least successful (lowest 25%) students in first grade. Researchers conducted interviews with the family advocates about the life histories of children in each of these groups. A qualitative analysis of the interview data revealed differences between the two groups in the areas of caregiving practices, maternal characteristics, child characteristics, and contextual sources of stress and support (Luster, Bates, Vandenbelt, & Casady, 2001). Recurrent themes, including maternal intelligence, maternal determination, lack of abuse in the home, academic stimulation, and the presence of a caring adult, acted as protective factors leading to academic achievement. Odds ratios indicated significant relationships of these factors to academic success. In addition, odds ratios indicated that the negative relationship between harsh parenting and academic success did not differ for African-American children. These data provide information about early school success among children considered to be "at risk" for school failure.

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

This document has been reproduced as received from the person or organization originating it.

Minor changes have been made to improve reproduction quality.

Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

Angela Casady

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

1

BEST COPY AVAILABLE

IR 020727

The Early Academic Success of Children Born to Low-Income Teenage Mothers

The transition to school is an important developmental transition for children (Belsky & MacKinnon, 1994; Entwisle & Alexander, 1998; Rutter, 1989; Stipek, 1999). Children who get off to a good start in elementary school tend to do better on later assessments of achievement and school performance than do their peers who struggle early on (Schweinhart, Barnes, Weikart, Barnett, & Epstein, 1993). Several longitudinal studies have shown that children's performance in kindergarten or first grade is predictive of whether or not the child will eventually drop out of high school (Alexander, Entwisle, & Horsey, 1997; Ensminger & Slusarcick, 1992; Luster & McAdoo, 1996; Schweinhart et al.).

This study focuses on family influences on the academic success of first-grade children born to low-income, adolescent mothers, a group identified by prior research as at risk for school failure (Coley & Chase-Lansdale, 1998; Furstenberg, Brooks-Gunn, & Morgan, 1987; Hayes, 1987; McLoyd, 1998). A disproportionate number of children born to teenage mothers perform poorly on measures of achievement, are retained in grade, and eventually drop out of school. However, there is considerable variability in the outcomes of children born to teenage mothers (Dubow & Luster, 1990; Furstenberg et al.). Children who are considered to be in high risk environments sometimes manage to succeed. What happens in the years prior to school entry that may influence how successful these children are in the early elementary grades? Specifically, how do the family experiences of children who are successful in the early elementary grades differ from the family experiences of children who are struggling in the early elementary grades?

An ecological perspective was used as a theoretical framework for addressing these questions (Belsky, 1984; Bronfenbrenner, 1999).

The family home is one of the key microsystems where children spend much of their time prior to school entry. Experiences in other settings (e.g., daycare, preschool) are also likely to influence the competencies, knowledge, and attributes that children have when they enter school, as are biologically-based characteristics of the children (Bouchard, 1990; Ceci & Williams, 1999). Nevertheless, researchers from a variety of theoretical perspectives have recognized the importance of what occurs in the family home during infancy and early childhood. Parents are typically children's first teachers and help to prepare children for their experiences outside the home, including school (White, 1990). They create children's first learning environments, and they make decisions about children's experiences in other settings. Children's experiences in the home differ markedly, and it seems likely that some children will be better prepared for the transition to school than others (Bradley & Corwyn, 1999; Gottfried, 1984; McLoyd, 1998).

What are the indicators of early school success? The National Education Goals Panel identified five dimensions of school readiness: physical well-being and motor development, social-emotional development, approaches to learning (curiosity and persistence), use of language, and cognition and general knowledge (Cody, 1993). Social skills, emotional strengths, physical development, and academic abilities are equally essential to children's early school success (NAEYC, 1995). The complex dimensions of school readiness are based on the recognition that children's early learning is influenced by individual, cultural, and contextual variation (Kagan, Moore, & Bredekamp, 1995). Parents and children vary in their abilities and attitudes regarding future academic achievement.

What do parents do that helps prepare children for the transition to school? Various researchers and theorists emphasized different proximal processes or experiences. Behavioral geneticists emphasize parents' contribution of inherited intelligence to children's cognitive competence (Plomin, 1990). Other researchers have emphasized the importance of literacy and language experiences in the home (Hann, Osofsky, & Culp, 1996; Hart & Risley, 1995; Hoff-Ginsberg & Tardiff, 1995), while Piagetian scholars have emphasized the variety of objects and activities available to children as they actively explore their environment (Ginsburg & Opper, 1979).

Attachment theorists have focused on the role that parents play in helping children to feel secure. The presence of academically stimulating toys available to children in at-risk environments relates to higher levels of attachment security (Casady, Diener, Isabella, & Wright, 2001). The presence of basic toys is also associated with child academic achievement among families in poverty (Duncan & Brooks-Gunn, 1997). In addition, children who are more socially competent in interactions with peers and teachers tend to be more securely attached (Sroufe, 1996). Social competence is associated with cognitive competence among at-risk children (Luster & McAdoo, 1996; McCabe et al., 1999; Rutter, et al., 1998).

Baumrind (1967; 1989) has emphasized the importance of parenting style. Authoritative parents, who strike a balance between being warm and supportive and effectively setting and enforcing limits, have children who tend to perform well on indicators of instrumental competence (Masten & Coatsworth, 1998). Recent research has suggested that authoritarian parenting is a protective factor for African-American children. For example, Gilchrist (1999) found that maternal negative control predicted behavior problems among children with adolescent mothers. Among African-American families, this effect was not as strong. Parenting practices

particular to an ethnic or cultural subgroup may influence children's achievement in different ways.

Characteristics of the parent (e.g., psychological well-being, personality, intelligence), characteristics of the child (e.g., temperament, attractiveness, gender), and contextual sources of stress and support (e.g., physical environment, ethnic identification) all determine the influence and effectiveness of parenting practices (Belsky, 1984). Belsky's theoretical model and subsequent research by others reinforces the importance of looking at the family environment from an ecological perspective (Bornstein, 1995; Bronfenbrenner, 1999; Luster & Okagaki, 1993).

In this study, we compared the family environments of high-achieving and low-achieving students born to low-income teenage mothers using qualitative methods. These qualitative methods yielded frequencies of themes that were then quantified. Odds ratios determined the significance of risk factors in determining children's academic and social competence. Children's competencies are likely to be influenced by characteristics of the caregiver and by contextual factors such as the stressors that caregivers face (e.g., neighborhood poverty, domestic violence). Thus, we focused both on parent-child interactions and factors that could influence the quality of those interactions.

Our quantitative analyses use a person-focused approach to resilience. Variable-centered approaches ignore the configural nature of resilience (Masten, Hubbard, Gest, Tellegen, Garmezy, & Ramirez, 1999). Categorical approaches focus on how groups of people sharing certain features compare to other groups of people. Resiliency presupposes that a child has been exposed to extreme risks. In our sample, these risks involve low-income status as well as having a mother who is not yet an adult herself. In addition, this study took place in Flint, Michigan, during a

period of time when the unemployment rates in Flint greatly exceeded that of neighboring communities within the state. A resilient child may be defined as one who is doing reasonably well within an at-risk environment. For this study, we focused on academic resilience.

Family advocates provided information about the children in the study. These advocates provided family support services to the young mothers and their children for five years -- from the time the children were born until the children were ready to begin school. Because of their knowledge of these families, they were able to provide extensive life histories of the children and information about their families' environments. Analyses of their interviews helped us to understand why some of their clients arrived at school with the skills necessary to succeed in that setting, in spite of the odds against them.

Method

The Family TIES Family Support Program

The young mothers and their first born children who participated in this study were involved in a family support program for teenage mothers called Family TIES (Trust, Information, Encouragement, and Support). The program was provided at the Mott Children's Health Center in Flint, Michigan. The teens enrolled in the program during the prenatal period and were eligible for services until the children were 5-years-old. At enrollment, the teens were randomly assigned to one of two treatment groups — the Home-Visited Group that received more intensive services or the Standard Program Group that received less intensive services. There were no differences in school achievement or social competence between these two groups.

Participants in the 1st Grade Assessment

One hundred and thirty-eight pregnant teens participated in Family TIES. To be eligible for the program the teens had to be from a low income family, expecting their first child, and to have less than a high school degree. At enrollment, the teens ranged in age from 14 to 19; the median age of the sample was 16. The ethnic composition of the sample reflected the Flint area;

57% were African American and most of the other teens were European American. During the program, data were collected on the families every 6-months until the children's third birthday and once again when the children were 54-months old.

A follow-up study was conducted when the children were in first grade. The purpose of the follow-up study was to examine factors related to early school success among children considered to be "at risk" for school failure because of family background characteristics (low-income, teenage mothers). During the fall semester of the first grade year, 97 young mothers from the Family TIES program were reinterviewed, and 96 of their children were given the Peabody Individual Achievement Test in their homes. Teacher ratings were gathered during first and second grade; this study uses only first grade ratings.

Measures

Peabody Individual Achievement Test

In the fall semester of first grade, the children in the sample were assessed using the Peabody Individual Achievement Test - Revised (PIAT-R). This individually administered test surveys a broad range of academic knowledge and skills for children five and over. The PIAT-R is standardized by both age and grade-level with a mean of 100 and standard deviation of 15 (Markwardt, 1989). This test has been used widely in research with ethnically diverse samples, such as the National Longitudinal Survey of Youth (Baker & Mott, 1989). For this study four subscales were administered: general information, reading recognition, reading comprehension, and mathematics. The grade-level standard scores for the four scales were averaged to create one indicator of overall academic competence. Children whose scores exceeded the standardized mean for this test were considered to be academically resilient.

Teacher Rating

In the spring semester of first grade, teachers were asked to rate the children relative to other children the same age in the areas of reading and math. For each area, the possible ratings were: 1) superior (highest 20%), 2) above average (next highest 20%), 3) average (middle 20%),

4) below average (next lowest 20%), and 5) much below average (lowest 20%). The reading and math ratings were summed and used as another indicator of early school success.

Most Successful and Least Successful Children

Children's scores on the PIAT-R and the summed teachers' ratings of reading and math were converted to standard scores (z scores), and then the mean of the two standard scores was computed. If a child only completed the PIAT-R, the child's z score for the PIAT-R was used as his or her indicator of academic success. The correlation between the PIAT-R and the teachers' ratings of reading and math was .73 ($p < .001$). After averaging the achievement test scores and teacher ratings, the children were divided into quartiles using the SPSS rank procedure. Twenty-four children were assigned to the top quartile (most successful group) and 24 children were in the bottom quartile (least successful group). On average, children from the two treatment groups did not differ on either the PIAT-R or teachers' ratings of reading and math competence. Given the lack of differences between the treatment groups and our interest in individual differences among the children, data from both treatment groups were combined for this study.

Family Advocate Interviews

The family advocates were interviewed about children who were assigned to the most successful and least successful groups. The family advocates had known most of these children from the time they were born until the time they were ready to enter kindergarten. The interviews provided an unusual opportunity to learn about the life histories of these children.

Luster and Bates interviewed the advocates about 35 children who were considered to be the most successful children for each advocate, based on PIAT scores. Topics covered included: the parenting the child received, the characteristics of the mother, the involvement of the father and extended kin or pseudo-kin in the child's life, what the advocate knew about the developmental history of the teenage mother, the characteristics of the child, and other circumstances explaining the child's level of success in the first grade. After the interviewing process, 27 children were assigned to the most successful and least successful groups, based on the top and bottom quartiles of the PIAT and teacher ratings. Thus, 11 children in the most

successful group and 16 children in the least successful group comprised the qualitative interviews, which are discussed in detail in an earlier paper (Luster, Bates, Vandenbelt, & Casady, 2001). Eight additional interviews were completed from children whose achievement scores ranged in the middle section; analyses for this group will not be included in this paper.

Analyses

For the qualitative portion of the study, the last three authors read all of the interviews independently looking for themes that distinguished between the most and least successful groups. Each author wrote his or her conclusions about differences between the groups. Luster and Vandenbelt wrote detailed information about each child and described the occurrence of various themes in each child's life.

The first author chose themes based on her knowledge of the risk and resilience literature, previous to reading conclusions of the other authors. These themes, or protective factors, included maternal intelligence, maternal determination, the presence of a caring adult in the child's life, the absence of abuse in the home, child attractiveness, and an academically stimulating environment. Next, she coded each child's interview transcript to see if the above themes were described. For example, if the family advocate mentioned that the mother was smart or made good grades, then a "1" was entered for maternal intelligence. If there was no mention of the mother's intelligence, or the mother was considered "slow in school," then a "0" was entered for maternal intelligence. Similarly, if the mother had toys and books in the home that the child used, a "1" was entered for academic stimulation. If the children were confined to playpens or carseats most of the day, then a "0" was entered for academic stimulation. Because the interviewers questions centered on maternal, child, and contextual contributions to children's school success, it was assumed that failure to mention the presence of protective factors, such as high maternal intelligence, indicated their absence.

Protective factors were coded according to specific definitions. High maternal intelligence was defined as academic intelligence, such as making good grades in school or being "bright." Words or phrases used to describe maternal determination included "motivated," "unusually

strong," and "driven." Child attractiveness was defined as a child who was engaging, endearing, and attractive. Such children were able to draw people to them; they were more than simply friendly or cute. Children who were considered attractive or friendly with negative qualifiers added (e.g., hyperactive, irritating, frightened) received a "0" on this factor. The presence of a caring adult in a child's life may not have referred to the mother herself. On occasion, the grandmother, aunt, or father was the driving factor behind a child's success. The absence of abuse in the home did not refer to the absence of spanking. Abuse was defined as harsh physical punishment or repeated witness of severe domestic violence. In all but one case, children who frequently witnessed domestic violence were victims themselves. Many mothers or fathers occasionally spanked their children. However, if they did not use a belt or a switch to punish their children, they were considered to have a home environment free from physical abuse. The first author also double coded her analyses of these themes with Luster's or Vandenbelt's summaries of the children's environments. Disagreements (3% of the 186 cells including all interviews) were resolved by discussion between Casady and Luster.

To determine frequencies of the various categories, dichotomous independent variables, including maternal intelligence, maternal determination, child attractiveness, lack of abuse, academic stimulation, and the presence of a caring adult, were cross-tabulated with the assignment to bottom or top quartiles of the academic achievement construct. This yielded frequencies that allowed us to perform odds ratios, using Montanez's odds ratio program (2001). In addition, chi-square analyses and odds ratios were performed using SPSS. Finally, odds of odds ratios measured moderator effects. For analyses that contained a zero cell, a delta of 0.5 was added to all cells in Montanez's program. To our knowledge, SPSS did not allow this option; therefore, comparisons between programs were made only for those analyses without zero cells.

Results

Analyses of main effects yielded significant results in all cases (See Table 1). Maternal characteristics of intelligence and determination were significantly related to academic achievement. Particularly, children whose mothers possessed a strong sense of determination

were more 32 times more likely to place among the achievers. Child attractiveness and contextual variables, including lack of abuse in the home, academic stimulation in the home, and the presence of a caring adult, also predicted academic success. The effect of abuse on academic achievement was 12.8 times greater among African-Americans; however, this was not a significant effect. A child with engaging and attractive characteristics was 20 times more likely to achieve at a high level. An academically stimulating home was 133 times more likely to produce academic achievement in the top quartile than homes lacking in academic stimulation. In sum, maternal, child, and contextual characteristics all played a part in academic success.

Discussion

Our interviews with the family advocates revealed striking differences in the circumstances and experiences of the children in our sample who were the most and least successful students in first grade. Differences were evident in the areas of maternal characteristics, contextual factors and child characteristics. With regard to caregiving, the least successful children appeared to have fewer positive experiences than their less successful peers. Without exception, children who did not have a nurturing caregiver placed in the bottom quartile of academic achievement. The results of this qualitative analysis are consistent with the results of a quantitative analysis of the same data in suggesting the importance of parenting practices during the preschool years for early academic success (Vandenbelt, Luster, & Bates, in press).

The influence of African-American ethnicity on the effectiveness of harsh parenting is not apparent in this sample. It is our opinion that harsh parenting is not a positive influence for any child, in spite of their ethnicity, neighborhood, or situation. Our conceptualization of harsh parenting as physical punishment certainly goes beyond the concept of authoritarian parenting. The type of authoritarian parenting described as normative for African-American families does include physical punishment (Rubin, 1996). Such discipline may be an adaptive factor for children who are in an environment where violence is the norm. However, when academic achievement in the public school system is the goal, we do not believe that harsh physical discipline produces the desired outcome.

In recent years, the influence of parenting has been questioned by some (Harris, 1998) and others have argued that, except for children who are raised in extreme circumstances (e.g., abuse, neglect), individual differences in caregiving contribute little to individual differences in children's development (Scarr, 1992; 1997). These positions have led to considerable debate within the field (Collins, Maccoby, Steinberg, Hetherington, & Bornstein, 2000; Maccoby, 2000). However, in our sample, the range of environments experienced by the children were so extreme it would be difficult for us to discount their importance. Most of the least successful children received little support for developing academic skills at home during the preschool years, and some of them experienced neglect at times. It would be difficult for us to accept the position that the outcome for these children would have been the same if they had been raised in a very supportive environment.

References

Alexander, K. L, Entwisle, D. R., & Horsey, C. S. (1997). From first grade forward: Early foundations of high school dropout. Sociology of Education, 70, 87-107.

Baker, P., & Mott, F. L. (1989). NLSY child handbook 1989: A guide and resource for the National Longitudinal Survey of Youth 1986 child data. Columbus, OH: Center for Human Resource Research, Ohio State University.

Baumrind, D. (1967). Child care practices anteceding three patterns of preschool behavior. Genetic Psychology Monographs, 75, 43-88.

Baumrind, D. (1989). Rearing competent children. In W. Damon (Ed.), Child development today and tomorrow (pp. 349-378). San Francisco: Jossey-Bass.

Belsky, J. (1984). The determinants of parenting: A process model. Child Development, 55, 83-96.

Belsky, J., & MacKinnon, C. (1994). Transition to school: Developmental trajectories and school

experiences. Early Education and Development, 5, 106-119.

Bornstein, M. H. (1995). Handbook of parenting (Vol 2.): Biology and ecology of parenting. Mahwah, NJ: Erlbaum.

Bouchard, T., Lykken, D. T., McGue, M., Segal, N. L., & Tellegen, A. (1990). Sources of human psychological differences: The Minnesota study of twins reared apart. Science, 250, 223-228.

Bradley, R. H., & Corwyn, R. F. (1999). Parenting. In L. Balter & C. Tamis-LaMonda (Eds.), Child psychology: A handbook of contemporary issues (pp. 339-362). Philadelphia: Psychology Press.

Casady, M. A., Diener, M., Isabella, R., Wright, C. (2001). Attachment security among families in poverty: Maternal, child, and contextual characteristics. Poster presentation at the Society for Research and Development biennial meeting, April 21, 2001.

Ceci, S. J., & Williams, W. M. (1999). The nature-nurture debate: The essential readings. Malden, MA: Blackwell Publishers.

Coley, R., & Chase-Lansdale, P. L. (1998). Adolescent pregnancy and parenthood: Recent evidence and future directions. American Psychologist, 53, 152-166.

Collins, W. A., Maccoby, E. E., Steinberg, L., Hetherington, E. M., & Bornstein, M. (2000). Contemporary research on parenting: The case for nature and nurture. American Psychologist, 55, 218-232

Dubow, E. F., & Luster, T. (1990). Adjustment of children born to teenage mothers: The contribution of risk and protective factors. Journal of Marriage and the Family, 52, 393-404.

Duncan, G., & Brooks-Gunn, J. (1997). Consequences of growing up poor. New York: Russell

Sage Foundation.

Ensminger, M. E., & Slusarcick, A. L. (1992). Paths to high school graduation or dropout: A longitudinal study of a first-grade cohort. Sociology of Education, 65, 95-113.

Entwisle, D. R., & Alexander, K. L. (1998). Facilitating the transition to first grade: The nature of transition and research on factors affecting it. The Elementary School Journal, 98, 351-364.

Furstenberg, F. F., Brooks-Gunn, J., & Morgan, S. P. (1987). Adolescent mothers in later life. New York: Cambridge University Press.

Ginsburg, H. & Opper, S. (1979). Piaget's theory of intellectual development (Second Edition). Englewood Cliffs, NJ: Prentice-Hall.

Gottfried, A. W. (1984). Home environment and early cognitive development: Integration, meta-analyses, and conclusions. In A. W. Gottfried (Ed.), Home environment and early cognitive development: Longitudinal research (pp. 329-342). Orlando, FL: Academic Press.

Hann, D. M., Osofsky, J. D., & Culp, A. M. (1996). Relating the adolescent mother-child relationship to preschool outcomes. Infant Mental Health Journal, 17, 302-309.

Harris, J. R. (1998). The nurture assumption. New York: The Free Press.

Hart, B., & Risley, T. R. (1995). Meaningful differences in the everyday experience of young American children. Baltimore: Brookes Publishing Company.

Hayes, C. D. (1987). Risking the future: Adolescent sexuality, pregnancy, and childbearing (Vol. 1). Washington, DC: National Academy Press.

Hoff-Ginsberg, E., & Tardiff, T. (1995). Socioeconomic status and parenting. In M. H. Bornstein (Ed.), Handbook of parenting (Vol.2): Biology and ecology of parenting (pp. 161-188). Mahwah, NJ: Erlbaum.

Kagan, S. L., Moore, E., & Bredekamp, S. (Eds.) (1995). Reconsidering children's early learning and development: Toward shared beliefs and vocabulary. Washington, DC: National

Education Goals Panel.

Luster, T., Bates, L., Vandenbelt, M., & Casady, A. (2001) The early academic success of children born to low-income teenage mothers.

Luster, T., & McAdoo, H. P. (1996). Family and child influences on educational attainment: A secondary analysis of the High/Scope Perry Preschool Data. Developmental Psychology, 32, 26-39.

Luster, T., & Okagaki, L. (1993). Parenting: An ecological perspective. Hillsdale, NJ: Erlbaum.

Maccoby, E. (2000). Parenting and its effects on children: On reading and misreading behavior genetics. Annual review of psychology, 51, 1-27.

Markwardt, F.C., Jr. (1989). Peabody Individual Achievement Test = Revised manual. Circle Pines, MN: American Guidance Service.

Masten, A. S., & Coatsworth, J. D. (1998). The development of competence in favorable and unfavorable environments: Lessons from research on successful children. American Psychologist, 53, 205-220.

Masten, A. S., Hubbard, J. J., Gest, S. D., Tellegen, A., Garmezy, N., & Ramirez, M. (1999). Competence in the context of adversity: Pathways to resilience and maladaptation from childhood to late adolescence. Development and Psychopathology, 11, 143-169.

McLoyd, V. C. (1998). Socioeconomic disadvantage and child development. American Psychologist, 53, 185-204.

National Association for the Education of Young Children (2000). NAEYC position statement on school readiness. NAEYC Position Statements. NAEYC: Washington, DC.

Plomin, R. (1990). Nature and nurture: An introduction to human behavioral genetics. Pacific Grove, CA: Brooks/Cole.

Rubin, L. B. (1996). The transcendent child: Tales of triumph over the past. New York: Basic Books.

Rutter, M. (1989). Pathways from childhood to adult life. Journal of Child Psychology and Psychiatry, 30, 23-51.

Scarr, S. (1992). Developmental theories for the 1990s: Development and individual differences. Child Development, 63, 1-19.

Psychological Science, 6, 143-148.

Schweinhart, L. J., Barnes, H. V., Weikart, D. P., Barnett, W. S., & Epstein, A. S. (1993). Significant benefits: The High/Scope Perry preschool study through age 27. Ypsilanti, MI: The High/Scope Press.

Stipek, D. (1999). Success in school – for a head start in life. In S. S. Luthar, J. A. Burack, D. Cicchetti, & J .R. Weisz (Eds.). Developmental psychopathology: Perspectives on adjustment, risk, and disorder. New York: Cambridge University Press.

White, B. L. (1990). The first three years of life. New York: Prentice Hall.

Table 1

Chi-Square and Odds Ratios of Protective Factors with Academic Achievement

Protective Factor		Odds Ratio	z-statistic
Maternal Characteristics:			
Determination	13.0**	31.5**	3.17
Intelligence	6.7**	9.9**	2.41
Child Characteristic:			
Attractiveness	10.5***	19.5**	2.94
Contextual Characteristics:			
Academic stimulation	20.0***	133.4***	3.06
No abuse present in the home	7.7**	12.3**	2.55
Presence of a caring adult	20.0***	133.4***	3.06

N = 27. **p < .01, ***p < .001.

Appendix B

Frequenices of cells

academic achievement x maternal determination

f_{11} = 9: high academic & determination

f_{12} = 2: high academic & low determination

f_{21} = 2: low academic & high determination

f_{22} = 11: low academic & determination

academic achievement x maternal intelligence

f_{11} = 9: high academic & intelligence

f_{12} = 2: high academic & low intelligence

f_{21} = 5: low academic & high intelligence

f_{22} = 11: low academic & intelligence

academic achievement x caring adult

f_{11} = 11.5: high academic & caring adult

f_{12} = 0.5: high academic & low caring adult

f_{21} = 2.5: low academic & high caring adult

f_{22} = 14.5: low academic & caring adult

achievement x child attractiveness

f_{11} = 9: high academic & attractive

f_{12} = 2: high academic & low attractive

f_{21} = 3: low academic & high attractive

f_{22} = 13: low academic & attractive

academic achievement x no abuse in the home

f_{11} = 7: high academic & no abuse

f_{12} = 4: high academic & abuse

f_{21} = 2: low academic & no abuse

f_{22} = 14: low academic & abuse

academic achievement x academic stimulation

f_{11} = 11.5: high academic & stimulation

f_{12} = 0.5: high academic & low stimulation

f_{21} = 2.5: low academic & high stimulation

f_{22} = 14.5: low academic & stimulation

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)

REPRODUCTION RELEASE

(Specific Document)

I. DOCUMENT IDENTIFICATION:

Title: The early academic success of children born to low-income teenage mothers

Author(s): M. Angela Casady, Tom Luster, Laura Bates and Marcia Vandenbelt

Corporate Source:

Publication Date:

II. REPRODUCTION RELEASE:

In order to disseminate as widely as possible timely and significant materials of interest to the educational community, documents announced in the monthly abstract journal of the ERIC system, *Resources in Education* (RIE), are usually made available to users in microfiche, reproduced paper copy, and electronic media, and sold through the ERIC Document Reproduction Service (EDRS). Credit is given to the source of each document, and, if reproduction release is granted, one of the following notices is affixed to the document.

If permission is granted to reproduce and disseminate the identified document, please CHECK ONE of the following three options and sign at the bottom of the page.

The sample sticker shown below will be affixed to all Level 1 documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

1

Level 1

[X]

Check here for Level 1 release, permitting reproduction and dissemination in microfiche or other ERIC archival media (e.g., electronic) *and* paper copy.

The sample sticker shown below will be affixed to all Level 2A documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE, AND IN ELECTRONIC MEDIA FOR ERIC COLLECTION SUBSCRIBERS ONLY, HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

2A

Level 2A

[ ]

Check here for Level 2A release, permitting reproduction and dissemination in microfiche and in electronic media for ERIC archival collection subscribers only

The sample sticker shown below will be affixed to all Level 2B documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

2B

Level 2B

[ ]

Check here for Level 2B release, permitting reproduction and dissemination in microfiche only

Documents will be processed as indicated provided reproduction quality permits.
If permission to reproduce is granted, but no box is checked, documents will be processed at Level 1.

I hereby grant to the Educational Resources Information Center (ERIC) nonexclusive permission to reproduce and disseminate this document as indicated above. Reproduction from the ERIC microfiche or electronic media by persons other than ERIC employees and its system contractors requires permission from the copyright holder. Exception is made for non-profit reproduction by libraries and other service agencies to satisfy information needs of educators in response to discrete inquiries.

Sign here, → please

Signature: Angela Casady	Printed Name/Position/Title: Angela Casady, M.S.
Organization/Address: Dept. of Family and Child Ecology, 107 Human Ecology, E. Lansing, MI 48824	Telephone: (517) 353-3508 FAX: (517) 355-4565
	E-Mail Address: casadyan@msu.edu Date: 10-12-02

(over)

Head Start's Sixth National Research Conf. (Washington, DC, June 26-29, 2002).

III. DOCUMENT AVAILABILITY INFORMATION (FROM NON-ERIC SOURCE):

If permission to reproduce is not granted to ERIC, *or*, if you wish ERIC to cite the availability of the document from another source, please provide the following information regarding the availability of the document. (ERIC will not announce a document unless it is publicly available, and a dependable source can be specified. Contributors should also be aware that ERIC selection criteria are significantly more stringent for documents that cannot be made available through EDRS.)

Publisher/Distributor:
Address:
Price:

IV. REFERRAL OF ERIC TO COPYRIGHT/REPRODUCTION RIGHTS HOLDER:

If the right to grant this reproduction release is held by someone other than the addressee, please provide the appropriate name and address:

Name:
Address:

V. WHERE TO SEND THIS FORM:

Send this form to the following ERIC Clearinghouse:	Karen E. Smith, Assistant Director ERIC/EECE Children's Research Center University of Illinois 51 Gerty Dr. Champaign, IL 61820-7469

However, if solicited by the ERIC Facility, or if making an unsolicited contribution to ERIC, return this form (and the document being contributed) to:

ERIC Processing and Reference Facility
4483-A Forbes Boulevard
Lanham, Maryland 20706

Telephone: 301-552-4200
Toll Free: 800-799-3742
FAX: 301-552-4700
e-mail: info@ericfac.piccard.csc.com
WWW: http://ericfacility.org

EFF-088 (Rev. 2/2000)